CHAPTER 8

INVENTORY MANAGEMENT

As you study this chapter you will learn that the term *inventory management* means more than just physical inventory. Inventory management requires control of and agreement between stock and stock records, accurate control procedures, evaluating usage, and anticipating requirements.

INVENTORY CONTROL PROCEDURES

Some inventory procedures were discussed in an earlier chapter. In addition, inventory control procedures mean providing for the availability of material, where, when, and in the kind and quantities required. It means balancing requests against available funds and purging storerooms of stock no longer applicable to installed equipment or in unserviceable condition. It means knowing the best levels of supply to be maintained and developing a sound review procedure to make sure supply adjustments are timely and accurate.

INVENTORY MANAGEMENT SEGMENT

Shipboard material inventories are divided into five segments for management purposes. These five segments that are discussed in the following paragraphs are operating space items (OSIs), repair parts, consumables, maintenance assistance modules (MAMs), and ready service spares (RSSs).

Operating Space Items

OSIs are those items in the custody and under the management of various department heads aboard your ship. This type of material was designated OSI by your ship's COSAL. Some of this material can require special inventory control and can be designated as controlled equipage.

Repair Parts

Repair parts are in the custody of the supply officer when supply department storage space permits and are always under his or her management.

Consumables

Consumables are in the custody of the supply officer when storage permits. You can carry a small amount of consumables such as cleaning supplies, various amounts of office supplies, and some paint. Stocked consumables (items carried as supply department stock) are managed by the supply officer whether such items are stored in supply department spaces or in other department spaces. Remember, you need the approval of the commanding officer to store your stock in another department's spaces. All nonstocked consumables are in the custody and under the management of the other department heads.

Maintenance Assistance Modules

MAMs are usually in the custody of the appropriate department head and should be located in the appropriate operating and maintenance spaces under the subcustody of operating/maintenance personnel. MAMs are replaceable modules required to execute an approved maintenance plan that calls for identifying the fault of a failed module through progressive or selective module substitution. MAMs will appear in your COSAL. When a MAM has replaced a bad one in the equipment, that department or work center is required to submit the proper paper work to the supply department to replace the one actually used.

Ready Service Spares

RSSs are repair parts that are in the custody of the appropriate department head. These repair parts and spares are designated by the Hardware Systems Command during maintenance engineering analysis to be stored in or near certain equipment for troubleshooting and for effecting rapid equipment repairs. These spares will appear in your COSAL and may also appear in section IIIA of your COSAL as items that you could stock if usage warrants as backup.

BASIC OBJECTIVES

Some of the basic objectives of inventory control procedures areas follows:

- Focus attention on the relatively few items that can satisfy the majority of onboard demands for material
- Provide for the accumulation of accurate consumption data required for supply, edit, audit, and SIM (SEAS) system and the 3-M program and to maintain adequate supply levels
- Establish a historical demand file for accumulating usage data for not carried material
- Make sure there is COSAL support for the parent equipment of each needed repair part
- Reduce physical inventory requirements and prescribe standard physical inventory requirements
- Provide for effective management of controlled equipage, presentation silver, and depot level repairable
- Reduce the number of stock record management data changes
- Prescribe the NAVSUP Form 1250-1 as the issue request document and as the normal requisitioning document of the nonautomated ships
- Automated ships except those in the submarine force

SHIPBOARD STOCK LEVELS

The basic Navy policy governing the range and depth of stock material that your ship is required to carry for self-support is stated in OPNAVINST 4441.12. In essence, the range and depth of nondemand-based items must be limited to COSAL authorized items and quantities. Demand-based items can be determined from usage and prescribed average endurance levels.

Levels of supply can be expressed in either of two ways.

- Numerically–so many units of an item
- Endurance–period of time for which supply support is required

Both of these terms are used. However, endurance is a general term and must be converted to numerical quantities before meaningful levels of supply can be determined.

Figure 8-1 illustrates the various terms used in computing stock levels. The operating level is the first factor since it represents the quantity that is required to sustain operations for a required period of time. Endurance requirements are issued by the Chief of Naval Operations and are shown in figure 8-2.

The safety level is an additional quantity added to the operating level to make sure of continued support even though normal replenishment is delayed or the ship experiences a greater than normal demand. These two levels, combined, constitute the stockage objective, or the maximum quantity of stock that should be on hand.

The third factor that must be considered is the order and shipping time for replenishment stock. The anticipated quantity of stores that will be consumed during the time required for the replenishment requisition to reach the supply activity and the replenishment stock to reach your ship is added to the stockage objective quantity. The resulting requisitioning objective is the maximum quantity of stock to be on hand and on order at any given time.

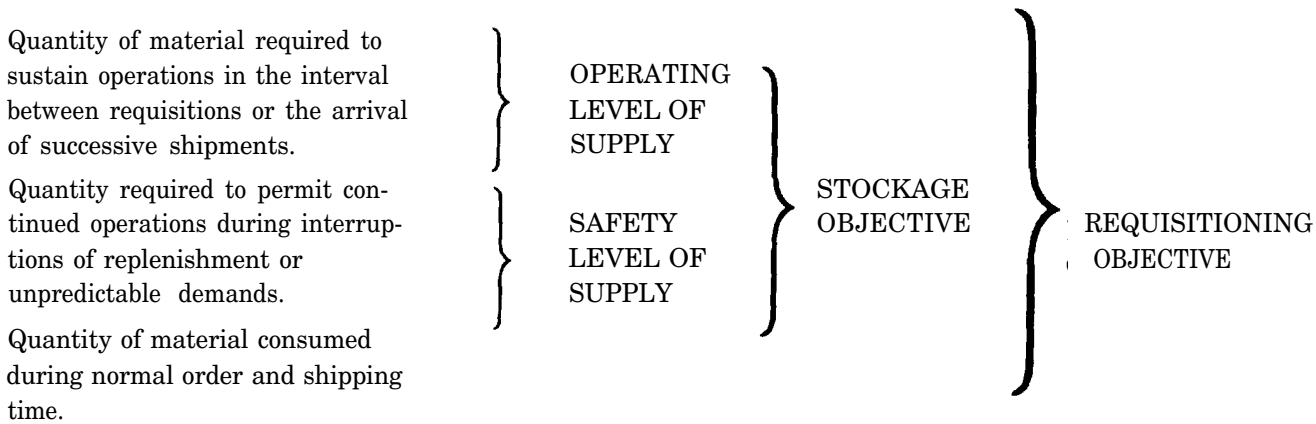

Figure 8-1.—Levels of supply.

Ship types[1]	Repair parts and equipment-related consumables (days' endurance)[2]	Nonequipment-related consumables (days' endurance)[2]
Aircraft carriers	75	60
Cruisers	75	45
DD\DDG\FF\FFG and small combatant ships (excluding submarines) of at least 1,000 ton displacement	75	30
AD\AR\AS[3]	75	75
Submarines[3]	75	75
Amphibious types		
No embarked troops	75	60
Embarked troops	75	45
CLF ships	75	60
Nonself-sustaining ships (landing craft, patrol gunboats, etc., of less than 1,000 ton displacement)	As required to accomplish assigned mission	

[1]To the extent of available storage space, ships that are assigned missions involving extended deployment (in excess of 60 days) and that are not normally supported by COMBAT LOGISTICS FORCES will provide endurance commensurate with the period of deployment required by their missions (e.g., AGS and ARS).

*[2]If the average endurance level is . . . . . 75 : 60 : 45 : 30 days,
the stockage objective will be . . . . . 90 : 75 : 60 : 45 days,
the operating level will be . . . . . 30 : 30 : 30 : 30 days, and
the safety level will be . . . . . 60 : 45 : 30 : 15 days.

*The high limit always will be the stockage objective plus the number of days of order and shipping time authorized and the low limit always will be 30 days less than the high limit. For special rules applicable to low limits for mandatory turn-in repairable (MTR) items, reference NAVSUP P-485.

[3]Excludes FBM tenders and submarines that are governed by OPNAVINST 4000.57.

*Reference NAVSUP P-485 for definitions of the terms underlined.

Figure 8-2.—Endurance requirements.

FUNDING PRIORITIES

Type commanders (TYCOMs) should issue funding priority instructions to their forces when available operating funds are not adequate to maintain full range and depth of allowances.

RELATIONSHIP TO MATERIAL READINESS OF SHIP

Adherence to established inventory control procedures by accurate documentation of valid usage data is essential to the maintenance of prescribed

endurance levels of stock required to sustain shipboard operations and to make sure of maximum material readiness of the ship.

RELATIONSHIP TO THE NAVY MAINTENANCE AND MATERIAL MANAGEMENT (3-M) SYSTEMS

Reporting of supply support of maintenance actions is required by the maintenance data system (MDS) of the 3-M Systems. Existing procedures for inventory control afloat, which are compatible with procedures in the *Ships' Maintenance and Material Management (3-M) Manual,* OPNAVINST 4790.4, make specific provisions for 3-M reporting by use of the green copies of NAVSUP Form 1250-1 from nonautomated ships or keypunched DD Forms 1348m, in prescribed format, from automated ships.

RELATIONSHIP TO SUPPLY, EDIT, AUDIT, AND SIM SYSTEM

Prescribed inventory control procedures provide for required data entries and submissions schedules of source documents and reports required by TYCOMs under the SEAS system. Maintenance-related documents submitted by nonautomated ships to TYCOMs (or designated processing facilities) under the SEAS system are subsequently processed for input to the 3-M program.

RELATIONSHIP TO OPTAR ACCOUNTING AND REPORTING

The procedures for inventory control afloat are compatible with the OPTAR accounting and reporting procedures in the Financial Management of Resources (Operating Forces), NAVSO P-3013-2. Postings and adjustments to the Requisition/OPTAR Log, NAVCOMPT Form 2155, should conform with the NAVS0 P-3013-2. The white copies of the NAVSUP Form 1250-1 in the consumption file are used to compute the consumption money values required in part I of the monthly Budget/OPTAR Reports as per the NAVSO P-3013-2. A consumption file is not required in nonautomated ships of the submarine forces since the Budget/OPTAR Reports for such ships are rendered by the parent tender. These types of ships so supported are required to provide the OPTAR holding activity with the blue copy of each NAVSUP Form 1250-1 that is submitted as a requisition and with the green copy of each DD Form 1348 that is used as a requisition or an obligation document.

RESPONSIBILITY

The supply officer is held responsible for all material that is carried in your storerooms, in other departmental spaces, and for all DTO material ordered. He or she is also responsible for all shipboard equipage and presentation silver. The latter responsibilities have already been discussed in chapter 4. Our focus will be on the supply officer's responsibility regarding the material in your spaces, other departmental spaces, and DTO material.

Stock Material in Supply Department Spaces

The supply officer is responsible for the storage, security, and inventory control of all stock material in his or her custody. The supply levels to be maintained should be based on authorized allowance lists or demand and the cognizant TYCOM's funding authorization. Normally, the replenishment of frequently demanded items should be assigned a high priority in the use of funds authorized by the TYCOM in the quarterly OPTAR.

Stock Material in Other Department Spaces

Although supply department stocks of consumables and repair parts in automated ships should be stored to the maximum extent practical in supply storerooms, sometimes it could be necessary or more expedient to store certain bulky consumables or certain technical repair parts in spaces under the control of other department heads. On tenders and repair ships, stocked repair parts and equipment-related consumables in the custody of other departments generally are referred to as "IMA technical stores." In nonautomated ships, all consumables that cannot be stored in supply department spaces should be procured for DTO to the using department(s). Some supply department stocks of certain repair parts, such as bulkhead-mounted spares, may require storage in spaces under the control of other department heads. When this happens, the supply officer should exercise inventory control of these items.

The authorization to store stock under another department head should be obtained in writing from the commanding officer. That department head will in turn designate someone in his or her department, in writing, who will be responsible for the material to the supply officer. The supply officer in turn will provide that individual a listing or an Afloat Locator/Inventory Record, NAVSUP Forms 1075, of all the material that individual has in his or her custody.

Nonstocked Material

Allowed material that is not stocked, but that is procured for DTO to using departments, is managed by the department heads having custody of the material. The supply officer is required to maintain custody records for the items designated as controlledeequipage. You are also required to maintain stock records to gather usage data for SIM DTO items in nonautomated ships and for all DTO items in automated ships.

PHYSICAL INVENTORY

Physical inventory is a prerequisite to efficient inventory control. The primary objective of a physical inventory is to make sure the inventory balances as reflected in stock or custody records agree with the actual physical quantities on hand. Other objectives are to:

- determine stock deficiencies that require replenishment;
- determine and reconcile all differences between physical counts and stock record balances;
- determine and implement controls needed to prevent recurrence of significant discrepancies;
- make sure material is correctly identified, properly stored and in apparent good condition, and that material subject to deterioration or breakage is adequately packaged and preserved;
- update location and other management data in stock and/or locator records; and
- provide a basis for adjusting financial balances in inventory control ledgers, if maintained.

PREPARING FOR PHYSICAL INVENTORY

Advance preparation is a contributing factor to the completion of a good inventory. The preparations required will depend upon the extent of the inventory being taken.

It is not feasible to close storerooms for inventory, but you can reduce transactions in general stores storerooms during this period. By notifying other departments of the dates when certain storerooms or types of material will be inventoried, they can anticipate most of their requirements and draw them before the inventory starts. Figure 8-3 illustrates a notice of

25 Mar 1993

MEMORANDUM

To: Executive Officer
From: Supply Officer

Subj: NOTICE OF PHYSICAL INVENTORY; REQUEST FOR INCLUSION IN POD

Ref: (a) NAVSUP Pub 485, par. 6066-4

1. In accordance with reference (a), it is requested that the following notice be included in the PODs for 28, 29, and 30 March 1993:

"All departments are advised that supply department stocks of SIM material (frequently issued consumables and repair parts) are scheduled to be inventoried during the period 1-12 April. It is important that the inventory be taken accurately and that it be completed within the prescribed time frame. Therefore, to prevent unnecessary interruptions during the progress of the inventory, issues of SIM items during the period 1-12 April will be restricted to emergency requirements that are certified as such in applicable issue request documents signed by cognizant department heads. In order to keep emergency issues to a minimum during the inventory, responsible departmental personnel are urged to analyze their maintenance schedules for the period 1-12 April, and to withdraw from stock, before 1 April, sufficient quantities of the SIM items needed to meet their anticipated requirements during the inventory period."

I. L. GARNER

Figure 8-3.—Notice of physical inventory.

physical inventory. Of course this does not hold true for repair parts storerooms and emergency requirements that must be handled as they occur. However, it is most important that the personnel taking the inventory and the person posting the inventory be fully instructed on proper handling of emergency issue documents. They may be marked "before inventory" and "after inventory" or other appropriate wording. The important thing is that they be marked in such a way that the stock records SK knows whether the inventory figure includes the quantity issued or that the issue was made before the item was inventoried.

TYPES OF PHYSICAL INVENTORY

The type and frequency of inventory is not always a matter of preference. Minimum inventory requirements are established by NAVSUP and vary according to the type of ship. However, the TYCOM, commanding officer, or supply officer may direct inventories that exceed these minimums.

Some of the more common types of inventory are described in the following paragraphs. NAVSUP P-485 should be consulted for more detailed descriptions of these and other types of inventory.

Bulkhead to Bulkhead Inventory

A bulkhead to bulkhead inventory requires a physical count of all stock material within the ship or within a specific storeroom or other storage area. A bulkhead to bulkhead inventory of the ship's entire stock of repair parts usually is conducted ashore in conjunction with an integrated logistics overhaul (ILO), formerly known as the supply operations assistance program (SOAP). A bulkhead to bulkhead inventory of a specific storeroom or other storage area is taken when a random sampling inventory of a particular storeroom or storage area fails to meet the inventory accuracy rate of 90 percent as prescribed in the NAVSUP P-485; when required by cognizant TYCOM instructions, or directed incident to a supply management inspection; when directed by the commanding officer; or when circumstances clearly indicate that it is essential to effective inventory control. Prior knowledge of specific stock numbers or individual item locations is not required for a bulkhead to bulkhead inventory of specified storerooms or other storage areas.

Specific Commodity Inventory

A specific commodity inventory requires the physical count of all items comprising a generic segment of material; for example, items stocked under the same cognizance symbol or federal supply class or that support the same operational function. A complete physical inventory of stock material comprising a generic segment is taken under the same conditions as those described for a bulkhead to bulkhead inventory. Prior knowledge of specific stock numbers and item locations is required to conduct a specific commodity inventory.

Special Material Inventory

A special material inventory requires the physical count of all items that, because of their physical characteristics, cost, mission essentiality, criticality, or other reasons, are specifically designated for separate identification and inventory control. Special material inventories include, but are not limited to, stock items designated as classified or hazardous. Physical inventory of such material is required on a scheduled basis, as per the frequency criteria prescribed in the NAVSUP P-485 for each of the special material categories. Items comprising each special category can be related to a particular element of supply management data normally entered in stock records. For example, hazardous items to be inventoried may be determined from stock records that contain an H, F, M, or R in the HIC data block. To facilitate determination of special materials requiring periodic inventory, nonautomated ships should maintain either a separate file of NAVSUP Forms 1075 applicable to such items (that can be used repeatedly as count documents) or an NIIN listing of the items comprising each category. (The special category item list [SCIL] developed during an ILO is especially suited for this purpose.) Special material inventories also include controlled equipage and presentation silver that are required to be inventoried following the frequency criteria prescribed in the NAVSUP P-485. Such material is identified in Controlled Equipage Custody Records, NAVSUP Forms 306, maintained as per the NAVSUP P-485 for each controlled equipage item and each presentation silver item (or set) in departmental custody. In automated ships that have implemented mechanized controlled equipage procedures, Equipage Custody Records, NAVSUP Forms 1331, rather than NAVSUP Forms 306, are maintained. Prior knowledge of specific stock numbers (or other material identification) and item locations is required to conduct a special material inventory.

Spot (Specific Item) Inventory

A spot inventory is an unscheduled type of physical inventory that is taken to verify the existence or nonexistence of a specific stock item. Usually, it is taken as the result of a total NIS indication in the issue request when the verified stock record for the requested item shows an on-hand balance; as the result of a partial NIS issue transaction when the verified stock record for the requested item reflects an on-hand balance in excess of the quantity issued; or when a posted issue document results in a negative stock record balance. A spot inventory also is taken to determine the on-hand quantity of a particular item when and as requested by the commanding officer, a fleet or type commander, a cognizant inventory manager, or other competent authority. For example, your commanding officer may request the physical inventory of any item that the commanding officer considers to be highly essential to prospective operations; a fleet or type commander may need to have total asset visibility of a particulary critical item; or an inventory manager may request physical inventory, disposition, and report of certain items that, after distribution within the supply system, are found to be defective.

Velocity Inventory

A velocity inventory is based on the premise that inaccuracies of stock record balances for any given items increase proportionately with issue frequency, and consequently, that most of the physical inventory effort should be concentrated on frequently demanded items. A velocity inventory, therefore, requires a periodic physical count of all stock items that experience relatively frequent demands (fast movers), and a physical count of items that experience infrequent or no demands (slow movers) only when such items are issued. Periodic inventories of SIM items and postissue inventories of non-SIM items, as prescribed in the NAVSUP P-485, are examples of velocity inventories.

Material Not in the Custody of the Supply Department

When you schedule the various different types of inventories to do, you must also include all the material that is being stored in other department heads' spaces. When doing this be sure you have set up a specific time to conduct your inventory.

SCHEDULED INVENTORY REQUIREMENTS

Although a complete physical inventory of all stocked repair parts usually is taken during ILOS periodically scheduled for most ships, there is a continuing need in every ship (whether or not it undergoes an ILO) to conduct physical inventories to make sure effective control of those materials normally required to perform its mission is maintained. Also, there may be certain material characteristics that require special management attention. The scheduled inventory requirements prescribed in the NAVSUP P-485 are considered to be minimal for effective inventory control of stock material. (Inventory requirements and specific instructions for controlled equipage and presentation silver are included in the NAVSUP P-485.) Items that can be included in more than one category should be inventoried under the criteria of the category that requires the greater inventory frequenty. For example, if hazardous items are inventoried annually and SIM items are inventoried semiannually, then any hazardous item that is designated as SIM should be inventoried semiannually. See figure 8-4 for an example of a physical inventory schedule.

NONSCHEDULED INVENTORIES

Nonscheduled inventories are those that are unexpectedly required incident to significant stock record inaccuracies discovered during an issue process, a random sampling inventory, or an annual supply inspection. Nonscheduled inventories also include those that are occasionally required of certain items when and as requested by an inventory manager, a fleet or type commander, the commanding officer, or other authority. Spot inventories are examples of unscheduled inventories. Bulkhead to bulkhead inventories of specified storerooms and specific commodity inventories also are examples of unscheduled inventories when required as the result of an unsatisfactory random sampling inventory or a supply management inspection. Although unscheduled inventories can neither be planned nor included in fiscal year inventory schedules, the estimated effort required for such inventories must be considered in the annual inventory program and in the assignment of supply department resources.

PREPARATION FOR INVENTORY

Before any physical inventory, you should collect all unposted receipt and expenditure documents

Last ILO completed April 1992
Next ILO tentatively scheduled April 1999

PHYSICAL INVENTORY SCHEDULE FY 1994

INVENTORY SEGMENT	NO. ITEMS	STOREROOM(S)/ OTHER SPACES	INCLUSIVE DATES	ACCURACY RATE %
SIM MAT'L	650	C, D	10/1-10/12/93	
BULKHEAD-MOUNTED SPARES	9	ENGRM #1 & MACHINE SHOP	11/1/94	
BULKHEAD-MOUNTED SPARES	9	ENGRM #1 & MACHINE SHOP	2/1/94	
CONTROLLED EQUIPAGE	125	DEPT'L SPACES	2/15-3/15/94	
SIM MAT'L	650	C, D	4/1-4/12/94	
BULKHEAD-MOUNTED SPARES	9	ENGRM #1 & MACHINE SHOP	5/1/94	
ELECTRON TUBES (C.O. designated items)	36	D	6/3/94	
CLASSIFIED NUC WEPS MAT'L	156	A	7/2-7/6/94	
HAZARDOUS MAT'L (NON-SIM ONLY)	48	B	7/16/94	
BULKHEAD-MOUNTED SPARES	9	ENGRM #1 & MACHINE SHOP	8/1/94	
		I. L. GARNER, LT, SC, USN Supply Officer		

Note: If an inventory is accomplished during inclusive dates that differ from those indicated in the inventory schedule, line out the scheduled inventory date(s), and directly above the deleted date(s), write in the actual inventory date(s).

Figure 8-4.—Physical inventory schedule.

pertinent to the segment of material to be inventoried. Upon collecting all the transaction documents for items placed in or removed from assigned storage locations, you should forward such documents to the office for posting to the stock records before starting the inventory.

Inspect Storerooms

After you forward all the receipts to the office, you should inspect the storerooms in advance to determine if the stores are properly identified and stored to facilitate the inventory. Sea storage may need to be modified to permit access to all items, but safety of personnel and stores must not be sacrificed. Like items can be consolidated into one location if feasible, and containers should be faced so that printed identification is visible. You should impress on the storeroom SK that the time spent before inventory to arrange and identify stores will result in much less time required for the actual inventory. Keeping storerooms squared away on a day-to-day basis immeasurably simplifies the inventory task. Speed does not necessarily contribute to accuracy,

but you are more likely to have a good inventory when it progresses rapidly and smoothly.

Inventory Personnel

Your ship's supply officer is responsible for the proper physical inventory of stock material and controlled equipage in supply department custody and should provide advisory assistance relative to the physical inventory of stock material, controlled equipage, and presentation silver in the custody of other departments. Material in supply department custody should be inventoried by qualified personnel assigned by the supply officer. Such assignments must be based on consideration of the knowledge and experience or training of individuals in relation to the size and complexity of the task to be accomplished in conformance with the inventory schedule. Unless personnel resources permit adequate training and constant use of selected inventory teams, inventories normally must be taken by the material custodians, provided they are considered to be properly qualified and provided the nature of the material (certain classified material, precious metals, alcohol, narcotics, and other sensitive or highly pilferable items) does not require inventory by the supply officer personally or by a specifically designated person. Other department heads must assign inventory tasks in their respective departments to reliable personnel who will discharge their assignments consistent with supply department inventory procedures and guidance from the supply officer.

RECONCILING DIFFERENCES

The stock records SK also has an important role in making sure a good inventory and the functions performed by the stock recordskeeper must be considered when you formulate the inventory plans. The stock recordskeeper's normal workload will be greatly increased because of posting the inventory and verifying the locations. It is probably better to have the inventory data forwarded to the office at regular intervals to permit posting as the inventory progresses rather than to wait until a storeroom is completed. In this way, differences in count or location can be investigated and verified or corrected before normal operations are resumed in the storeroom.

Guidelines covering inventory gains and losses and consolidating or changing locations should be included in the instructions given before the inventory. By so doing, inventory personnel will know when they should make decisions and when they should seek your advice. This not only gives them experience in making decisions, but it also relieves you of routine details that can just as well be performed by subordinates.

INVENTORY RECORDS AND FILES

The following paragraphs will explain the records and files to be used by nonautomated ships for the inventory management of repair parts and consumables. These records and files that you use to keep record of issues, receipts, and locations of such material are vital to a good inventory.

STOCK RECORDS

A Stock Record Card, Afloat, NAVSUP Form 1114m or NAVSUP Form 1114 (Manual), should be maintained for each stocked MAM, RSS, repair part or consumable, and for each SIM DTO item. If your ship has been commissioned or has completed an ILO since July 1974, you should be maintaining the following colored cards:

- Blue–for reactor plant items, Q COSAL items
- Red or red border–special category items, DLR, shelf-life, hazardous, and classified
- Buff–for all other items

Stock records in all ships should include outstanding requisitions numbers and a history of all receipt and expenditure transactions, as well as all management data required for proper inventory control. All your stock record cards should be retained until your next ILO. The distinction and application of the two types of stock record cards are described in the following paragraphs.

NAVSUP Form 1114m

The NAVSUP Form 1114m is an IBM type of stock record card in which significant management data elements are keypunched to provide a nonautomated ship with the capability to obtain various automatic data processing equipment. The form also contains additional data blocks for manual entries of check marks or 12-character codes for reflecting supplementary management data, when applicable. A complete set of NAVSUP Forms 1114m, keypunched and interpreted in the format described in the ILO manual, is provided by the ILO ADP facility at NSC Oakland to each nonautomated ship upon completion of an ILO. A complete set of keypunched and interpreted NAVSUP

Forms 1114m also is furnished by the SPCC to each nonautomated new construction or major conversion ship before its commissioning or recommissioning.

NAVSUP Form 1114 (Manual)

The NAVSUP Form 1114 (Manual), which is identical to the NAVSUP Form 1114m in design, is a continuous feed type of stock record form that facilitates typing the top and bottom lines of new stock record cards required to be prepared when keypunched and interpreted NAVSUP Forms 1114m are filled, or when new items are added to shipboard stock between ILOs.

STOCK FILES

You can keep your stock files in either horizontal or vertical filing equipment. The use of card file trays for SIM items and the use of card tile drawers for non-SIM items are recommended. Regardless of the filing equipment used, separate files are required for non-SIM and SIM items. To prevent misfiling or loss of stock record cards, you should only allow trained or properly supervised personnel access to your stock record files.

DATA ELEMENTS

Mandatory data elements that are included in NAVSUP Forms 1114m and 1114 (Manual) are discussed in the following paragraphs. Most important entries will be explained. Any other entries that are required can be found in the NAVSUP P-485, chapter 6.

Two of the most important entries that you must make on these forms are the COG and the NSN of the material. You are also required to enter the item description, unit of issue, unit price, the allowance part list or the allowance equipage list number, the location, your ship's unit identification code, allowance list quantity, allowance type code, the applicable fund code (last character only), and the beginning month of demand. If you have just completed an ILO or the ship has just been commissioned, most of the blocks will already have been entered.

These cards are how you keep track of where the material is stored, and how many are on hand. When you have to reorder any of this material, you must put the Julian date, requisition number, and quantity in the appropriate blocks. Upon receipt of the material, you make the entry on the card to bring the quantity on hand up. (See fig. 8-5.)

The NAVSUP Forms 1114m and 1114 (Manual) compose your stock record battery. As mentioned earlier, these cards are kept from one ILO to the next ILO. These forms are a historical demand file of everything that you have issued and ordered for stock.

MATERIAL IDENTIFICATION ABOARD SHIP

Another important feature of inventory is the opportunity it affords to purify storeroom stock, both repair parts and general stores. An alert inventory can eliminate errors such as the following that were made during or since the previous inventory:

- Unlike items bearing the same NSN
- Identical items having different NSNs
- NSN changes not made on all items in a location

Items should also be inspected for physical condition as they are inventoried.

The following paragraphs explain some of the terminology that is used regarding the material, classification, and various types of catalogs that the Navy uses.

TERMINOLOGY

Proper item identification is essential to the receipt of correct material required. It is also important to have a clear understanding of some of the terminology used in material identification. A few of these terms are discussed next.

Material

The term *material* is used to designate supplies, repair parts, equipment, and equipage used in the Navy.

Equipment

The term *equipment* refers to any fictional unit of hull, mechanical, electrical, ordnance, or electronic type of material that is operated singly or as a component of a system or subsystem. The equipment is identified by a component identification (CID) number, numerical control code (NCC), allowance parts list (APL), or similar designation. You also have equipment that is known as support equipment. This type of equipment includes test equipment, fixtures, hand tools, and various other items. It is required for maintenance, assembly, disassembly, overhaul, repair, and test or check of an end item.

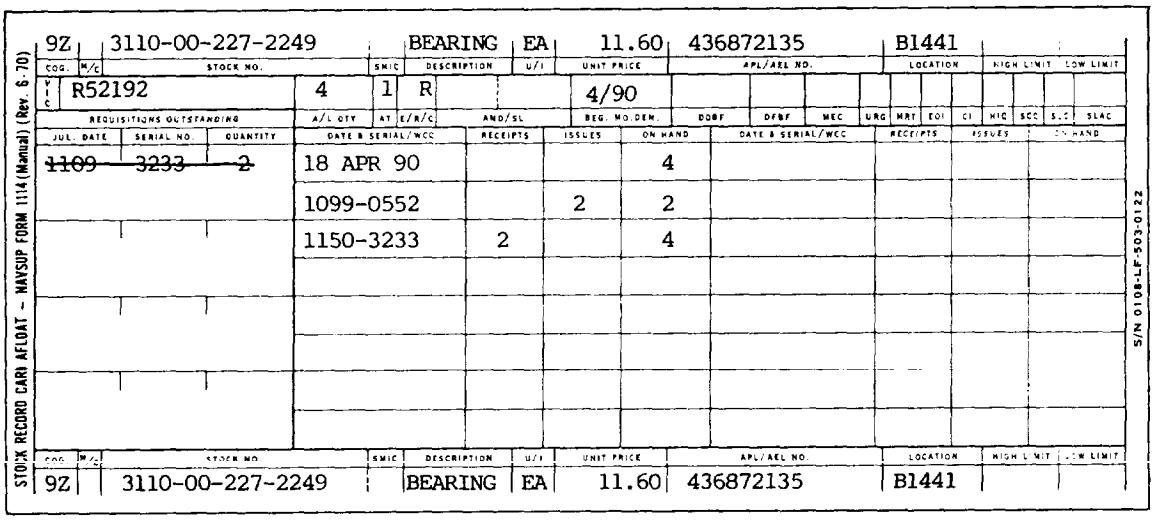

Figure 8-5.—An example of a NAVSUP Form 1114.

Circuit Symbol

Circuit symbols are used for electronic equipment in the same way that part numbers and drawing numbers are used for other equipment. Most circuit symbol numbers are cross-referenced in your COSAL to an NSN for the required part.

Major Component

A major component is an item that is supported by an APL but that is used in a larger unit, such as an equipment. For example, a meat slicer in a general mess is an equipment that is supported by an APL and contains two components, a drive motor and the starter motor, both supported by different APLs than the meat slicer.

CLASSIFICATION SYSTEM

The Federal Catalog System encompasses the naming, description, classification, and numbering of all items carried under centralized inventory control by the Department of Defense and the civil agencies of the federal government as well as the publication of related identification data. Only one identification may be used for each item for all supply functions from purchase to final disposal.

The federal supply classification (FSC) number is designed to permit the classification of all items of supply used by the federal government. Each item of supply has only one FSC number. The FSC number consists of four digits. The first two digits of the FSC number give the federal supply group that covers abroad category of material. The second two digits give the federal supply class within the broader group to which a specific type of material belongs. The federal supply groups and classes are defined in DLA Publication H-2. Some federal supply groups and related classes are as follows:

GROUP	TITLE
20	Ship and Marine Equipment
30	Mechanical Power Transmission Equipment
40	Rope, Cable, Chain
51	Tools

CLASS	
2040	Marine Hardware and Hull Items
3030	Belting, Drive Belts, and Accessories
4010	Wire Rope, Steel
5110	Hand Tools, Edged, Nonpowered

TYPES OF CATALOGS

Material identification does not end with the assignment of a stock number. Your customers of the supply system must be provided with some means of identifying their needs to a stock number that has been

assigned to the desired items. Identification of needs can be established by using various types of publications or catalogs. We will discuss a few of these catalogs in the following paragraphs.

Management List-Navy

Complete and accurate management data must be available for requisitioning purposes and for effective financial control of material. The *Management List-Navy* (ML-N) provides basic management data.

The ML-N is published by the Defense Logistics Services Center, Battle Creek Michigan. It is published on a 48X microfiche and a complete revision is distributed annually. If you need the ML-N quarterly, you can order it from the Defense Logistics Services Center, Battle Creek, Michigan, on a DD Form 1149, using your OPTAR funds. The ML-N includes all the necessary information to prepare a requisition and also includes an integrated historical record of deleted and superseded NIINs, with appropriate codes for disposition.

Master Repairable Item List

The *Master Repairable Item List* (MRIL) is a catalog of selected Navy-managed items that, when unserviceable and not locally repairable, are required to be turned in to a collection point for repair. The MRIL is published on microfiche and is distributed each month and consists of two parts. If you need copies of the MRIL, you can order it from the Fleet Material Support Office, Mechanicsburg, Pennsylvania.

Hazardous Material Information System

The *Hazardous Material Information System* (HMIS) has superseded the *Consolidated Hazardous Item List* (CHIL). The HMIS is issued in a basic edition dated in November and in the quarterly updates dated February, May, and August. This publication provides information to assist you in managing hazardous materials so that the risks involved in the performance of various jobs are minimized. There is a wide range of data in the system related to safety, health, packaging, labeling, transportation, and disposal of such material. The HMIS also provides labeling and packing requirements, shipment, storage, and handling safety precautions as well as other information concerning the characteristics of the items listed. The listing is separated into three sections as follows:

- Trade Name/Product Identity Cross-Reference
- Part Number Cross-Reference
- Specification Number Reference

Commercial and Government Entity Catalog Handbook

The *Commercial and Government Entity* (CAGE) *Catalog Handbook H4/H8* contains the names and addresses and five-digit CAGE code of manufacturers that have previously or are currently producing items used by the federal government. This handbook is published in two parts. The first part cross-references the name of the company or the manufacturer to code and the second part cross-references the code to the name. The CAGE is used in conjunction with the part number, item number, symbol, or trade name assigned by the manufacturer to its product. You must use care when using this catalog because some major manufacturers have more than one code assigned. These codes are often assigned to separate divisions or affiliates as well as to a parent company.

Identification Lists

Identification lists (ILs) are developed and published on microfiche to provide approved national item description and related data required to identify or select items of supply. The ILs are consolidated to include items of supply that are used by all services. You will occasionally encounter an NSN that is not in the ML-N, and when this happens you must call a shore activity to get the rest of the information. The ILs are sequenced in three sections.

- Index section–NIIN sequence, references the applicable page number in the descriptive section
- Descriptive data section–alphabetic sequence by item name and provides a complete description, including the CAGE and part number
- Reference data section–alphabetic sequence by item name and provides manufacturer's part number and CAGE

The ILs are distributed only to shore activities, aircraft carriers, and CLF ships. You can request copies of the ILs through your TYCOM or FMSO.

Afloat Shopping Guide

The *Afloat Shopping Guide* (ASG) is designed to help fleet personnel in identifying the NSN for material that is frequently requested by ships. It includes a

detailed description of each item and stock numbers of substitute items. It also includes illustrations and diagrams of many types of material. The ASG is printed in six different sections. You still must use the ML-N to check for unit price, current NSN, and unit of issue.

Consolidated Master Cross-Reference List

The *Consolidated Master Cross-Reference List* (C-MCRL) is a consolidated list of all NSN items of supply in the FSC system. Consequently, it includes many NSNs that are not listed in the ML-N. The C-MCRL is distributed annually to Navy users. The C-MCRL is made up of two parts. Part I crosses both reference numbers and CAGE numbers to NSNs. Part II crosses NSNs to both reference numbers and CAGE numbers.

DETERMINING STOCK LEVELS

The determination of stock levels for individual items depends on whether the item is SIM or non-SIM. This section focuses on the manual SIM computation.

SIM ITEM COMPUTATION OF DEMAND-QUARTERLY

The demand quantities entered in the Issues column of each SIM stock record during the past 6-month, 9-month, or 12-month period are totaled. Based upon the total quantity determined for the demand period, the high limit, low limit, and safety level (HL/LL/SL) quantities in each SIM stock record will be adjusted, as necessary, to reflect the quantities authorized in the appropriate average endurance table as illustrated in figure 8-6. Computation of the total demand quantity will be more frequent, if necessary, to reduce the possibility of stock shortages or excesses. Periods of unusual demand will be excluded from the demand period. Quantities issued during an unusual demand period will be excluded from the computation of the total demand quantity. In determining the total demand quantity, inventory and survey losses of missing material will be included; inventory and survey losses of on-hand material unfit for either issues or transfers will not be included. When computing the total demand quantity in stock records that reflect a unit of issue change such as PR to EA or EA to DZ, any issue quantities posted before the change must be converted (in the count, not on the stock record) to quantities that correspond with the current unit of issue. The demand period used, the total demand quantity determined, and the revised HL/LL/SL quantities should be made in pencil because of the frequent changes normally required.

Assuming a prescribed average endurance level of 75 days and an order and shipping time (O&ST) of 30 days, the revised data entries in figure 8-6 should be used as follows:

If the total quantity issued from 18 April to 17 October 1993 (6 months) equals 20; then, for a 75-day average endurance and a 6-month demand period, figure 8-6 indicates 14 as the high limit, 10 as the low limit, and 7 as the safety level. When the quarterly computation of demand results in a total demand quantity that is not listed in the average endurance table, the appropriate HL/LL/SL quantities can be determined by:

- selecting two (or three, if necessary) of the listed demand quantities that, when combined, equal the total demand quantity determined from the stock record; and then
- adding the HL/LL/SL quantities for each demand quantity selected.

For example, assuming a prescribed average endurance of 75 days, an authorized O&ST of 30 days, and a 6-month demand period, the HL/LL/SL quantities authorized for a total demand quantity of 35 can be determined from the table as follows:

Listed demand quantities	HL	LL	SL
30	20	15	10
+5	+4	+3	+2
35	24	18	12

When the average endurance tables for 9-month and 12-month demand periods are used for determining the HL/LL/SL quantities authorized, a quantity of one for each additional 3-month period must be added to each of the totals derived by the method described in the above computation. Per OPNAVINST 4441.12, the range and depth of allowance material may be changed at the shipboard level under stockage criteria prescribed by approved shipboard procedures. Such procedures are authorized by fleet commanders in chief for use of variable operating and safety levels and for intensive inventory management of special items.

75 Days' Average Endurance

6-Month Demand Period. When the quarterly computation of demand is based upon a 6-month demand period, the HL\LL\SL quantities authorized for 75 days' average endurance are as follows:

6-month demand quantity[1]	O&ST - 0 days		O&ST- 30 days		O&ST- 75 days		O&ST- 90 days		Safety level
	High limit	Low limit	High limit	Low limit	High limit	Low limit	High limit	Low limit	
1	1	0	1	0	1	0	1	0	0
2	1	0	2	1	2	1	2	1	0
3	2	1	2	1	3	2	3	2	1
4	2	1	3	2	4	3	4	3	1
5	3	2	4	3	5	4	5	4	2
6	3	2	4	3	6	5	6	5	2
7	4	3	5	4	7	6	7	6	3
8	4	3	6	4	8	6	8	7	3
9	5	3	6	5	9	7	9	8	3
10	5	4	7	5	10	8	10	9	4
11	6	4	8	6	11	9	11	10	4
12	6	4	8	6	11	9	12	10	4
13	7	5	9	7	12	10	13	11	5
14	7	5	10	7	13	11	14	12	5
15	8	5	10	8	14	12	15	13	5
16	8	6	11	8	15	12	16	14	6
17	9	6	12	9	16	13	17	15	6
18	9	6	12	9	17	14	18	15	6
19	10	7	13	10	18	15	19	16	7
20	10	7	14	10	19	15	20	17	7
30	15	10	20	15	28	23	30	25	10
40	20	14	27	20	37	30	40	34	14

Figure 8-6.—Example of basic endurance table.

ORDER AND SHIPPING TIME

The O&ST was used as a factor in determining the HULL quantities listed for each demand quantity in the average endurance table. (See figs. 8-2 and 8-6.) Therefore, the proper O&ST must be determined before selecting and entering applicable HULL quantities in SIM stock records. The authorized O&STs are prescribed as follows:

- 0 days, for deployed and nondeployed ships when items can be readily obtained from a SERVMART or a tending ship throughout the quarter
- 30 days, for nondeployed ships in the United States excluding Alaska and Hawaii; and for deployed ships when items can be obtained from stock points in Alaska, Hawaii, and outside the United States or from combat logistics force (CLF) ships throughout the quarter
- 75 days, for deployed ships in areas other than the Western Pacific when items can be obtained only from the United States excluding Alaska and Hawaii
- 90 days, for deployed ships in the Western Pacific when items can be obtained only from the United States excluding Alaska and Hawaii

Modification of the stated O&STs may be authorized by the cognizant fleet commander in chief when considered necessary to maintain prescribed average endurance levels.

REPLENISHMENT QUANTITY

When an issue (or other expenditure) of a SIM item has been posted to the stock record, a determination will be made as to whether or not replenishment is required. If the on-hand balance plus the on-order quantity is greater than the low limit, no replenishment is required. If the on-hand balance plus the on-order quantity is equal to or less than the low limit, replenishment is required, and the quantity to be requisitioned will be determined under the following formula:

Requisition quantity = high limit - (on-hand + on order)

ECONOMIC ORDER QUANTITY

Unless otherwise directed by the TYCOM, the replenishment quantity of low-cost, small-cube SIM items (pencils, paper clips, certain capacitors, and resistors) may be increased by an additional 90 days of supply if the total money value of the additional quantity will not exceed $40 per line item. In the stock records for such items, a check mark or an X will be entered in the economic order item (EOI) data block. Economic orders benefit the ship inasmuch as less frequent requisitioning, less material handling, and fewer stock record entries are required. Economic orders apply to both chargeable and nonchargeable material.

POPULATION-RELATED CONSUMABLES

If a ship's normal onboard personnel count is increased incident to a prospective deployment, the stock levels of SIM consumables with usage directly related to the number of personnel on board (toilet paper, napkins, paper towels, and mess gear) will be adjusted upward to reflect anticipated usage during the deployment. For example, if the normal onboard personnel count in port is 200 members, but the ship expects to have 240 members on board while deployed, the existing high limits, low limits, and safety levels of population-related consumables will be increased by 20 percent.

NON-SIM ITEM COMPUTATION OF DEMAND

Each time that an issue of a non-SIM item is posted, the stock record must be reviewed to determine if the most recent issue transaction was the second demand within a 6-month period, thereby qualifying the item for SIM designation. (Inventory losses, whether for missing material or on-hand material unfit for issue, should not be considered as demands in determining demand frequency.) If the item qualifies for SIM designation, the total demand quantity for the past 6-month demand period is determined by using the chart in figure 8-6; the appropriate HL/LL/SL quantities should be entered on the stock record; the cognizance symbol, NSN, unit of issue, and unit price are verified or updated with the ML-N; and the item is replenished as a SIM item under SIM replenishment procedures. If the item does not qualify for SIM designation, it should be replenished as explained next.

Non-SIM items should be replenished on a one-for-one replacement basis (not to exceed the authorized allowance quantity), except when funds available to the TYCOM are inadequate to permit replenishment to the full range and depth of allowance as per the NAVSUP P-485. When a TYCOM's funding restrictions prevent replenishment of an issued repair part to the depth of the COSAL/ISL quantity, the notation DIAL and the deficient quantity (for example,

DIAL [2]) should be entered in data block 29 of the issue request. Since deficiencies of repair parts with a unit price of less than $2 are not included in the DIAL program, ships must replenish such items per the TYCOM's replenishment policy. If a non-SIM item was formerly a SIM item and the on-hand quantity exceeds the allowance quantity authorized in the COSAL, no replenishment action is taken until the on-hand quantity is reduced to less than the allowance quantity (or to the quantity authorized by the TYCOM).

LOAD OUT FOR EXTENDED DEPLOYMENT

At least 30 days before the scheduled commencement of an extended deployment (for more than 30 days), a ship should:

- revise the high and low limits of its SIM items not included in the *Consolidated Afloat Requisitioning Guide Overseas* (CARGO) to reflect an O&ST of 90 days if deploying to the Western Pacific, or an O&ST of 75 days if deploying to other areas; and

- submit requisitions for material required to bring on-hand quantities of all SIM items up to authorized high limits before deployment. Also, if so directed in service force instructions, submit requisitions for the first scheduled underway replenishment (UNREP) or CLF replenishment (for replacement of materials expected to be consumed between the deployment commencement date and the first UNREP or CLF replenishment).

STOCK REPLENISHMENT PROCEDURES

The NAVSUP Form 1250-1 is used to process an issue, loss by inventory, or to create a shortage that causes a stock replenishment requirement that is normally used to initiate a requisition. If a requirement for stock material is determined, a NAVSUP Form 1250-1 is prepared to requisition the material. Data entries on the form should be completed or verified before placing the document in the procurement action file.

Before you initiate the document with a requisition number, you should verify all the replenishment data of a non-SIM item against the ML-N. If it is a SIM item, you can take the information off the stock record card. Upon doing this you are now ready to order the material for stock.